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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/600,457

06/23/2003

Aarne Halme

3501-1064

7207

466

7590

04/29/2009

YOUNG & THOMPSON

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EXAMINER

WILLS, MONIQUE M

ART UNIT

PAPER NUMBER

1795

MAIL DATE

DELIVERY MODE

04/29/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/600,457	<b>Applicant(s)</b> HALME ET AL.	
	<b>Examiner</b> Monique M. Wills	<b>Art Unit</b> 1795	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 January 2009.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 7-11, 17-21 and 24-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 7-11, 17-21 and 24-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 June 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Response to Amendment***

This Office Action is responsive to the Amendment filed January 16, 2009. The rejection of claims 7-11, 17-21 & 24-27 as being unpatentable over Katz U.S. Pub. 2006/0269826 is overcome.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

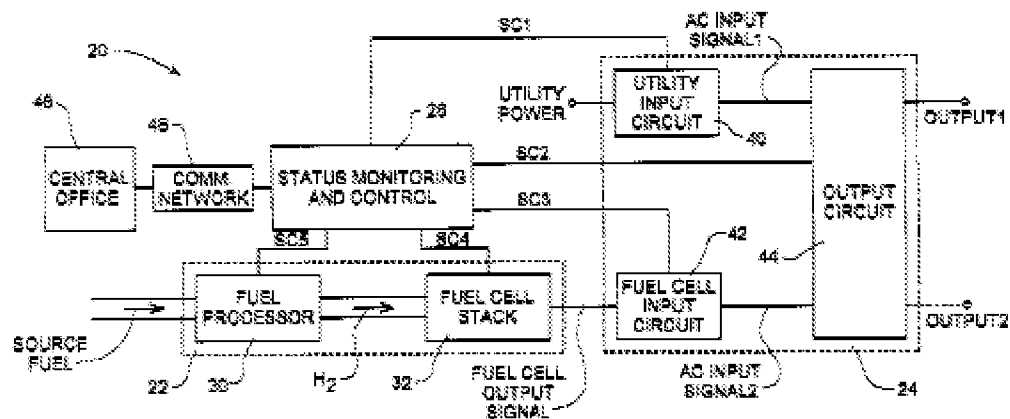
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7-11, 17-21 & 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Liu U.S. Pat. 6,602,627 in view of Shioya U.S. Pub. 2002/0081468.

Liu teaches a method for generating electric power, wherein the electric power is generated with fuel cell units, wherein the fuel cell units are connected through a controllable switch, specifically a switch-mode dc-to-dc voltage regulator is used to regulate the slow and rapid dynamics of voltage obtained from the fuel cell stack. See column 2, lines 60-68. The status monitoring and control signals and generate a switch control signal that opens or closes a switch within the fuel cell input circuit that

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determine whether the second AC input signal reaches the output circuit. See column 5, lines 20-30. This step embraces the instant step for defining one or more properties of the cells and controlling on the basis of the definition the controllable switch of the cell having specific property to conducting state. With respect to the step for continuously defining the voltages of the cell, for controlling on the basis of the definition, the controllable switch of a specific cell to conducting state, and for keeping the switch in conducting state until the voltage of the specific cell decreases below a predefined limit value. The instant limitations are satisfied, because Lui teaches that the status monitoring and control circuit will analyze the voltage and current sense signals and generate a switch control signal that opens or closes a switch within the fuel cell input circuit. See column 5, lines 25-35. The fuel cell is also arranged to provide power to an integrated electric power converter. See column 3, lines 1-5. A control circuit is operatively connected to the fuel cell stack. The output circuit controls whether the output signal is generated based on the utility power signal or hydrogen. See column 2, lines 55-68.



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Lui does not expressly disclose the employment of biocatalyst fuel cells.

However, Shioya teaches that it is well known in the art to employ biocatalyst fuel cells, because they are high efficiency fuel cells that are less harmful to the environment than conventional fuel cells. See paragraph 12.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the instant invention was made to employ the biocatalyst fuel cells of Shioya in the fuel cell system of Lui, because they do not contain toxic materials and are environmentally safe.

### ***Response to Arguments***

Applicant asserts that the cited reference Katz U.S. Pub. 2006/0269826 has been antedated by the English translation of Finnish priority Application No. 20021286. This asserted is correct and the previous pending rejections are withdrawn.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Monique Wills whose telephone number is (571) 272-1309. The Examiner can normally be reached on Monday-Friday from 8:30am to 5:00 pm.

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If attempts to reach Examiner by telephone are unsuccessful, the Examiner's supervisor, Patrick Ryan, may be reached at 571-272-1292. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Monique M Wills/  
Examiner, Art Unit 1795

/PATRICK RYAN/  
Supervisory Patent Examiner, Art Unit 1795